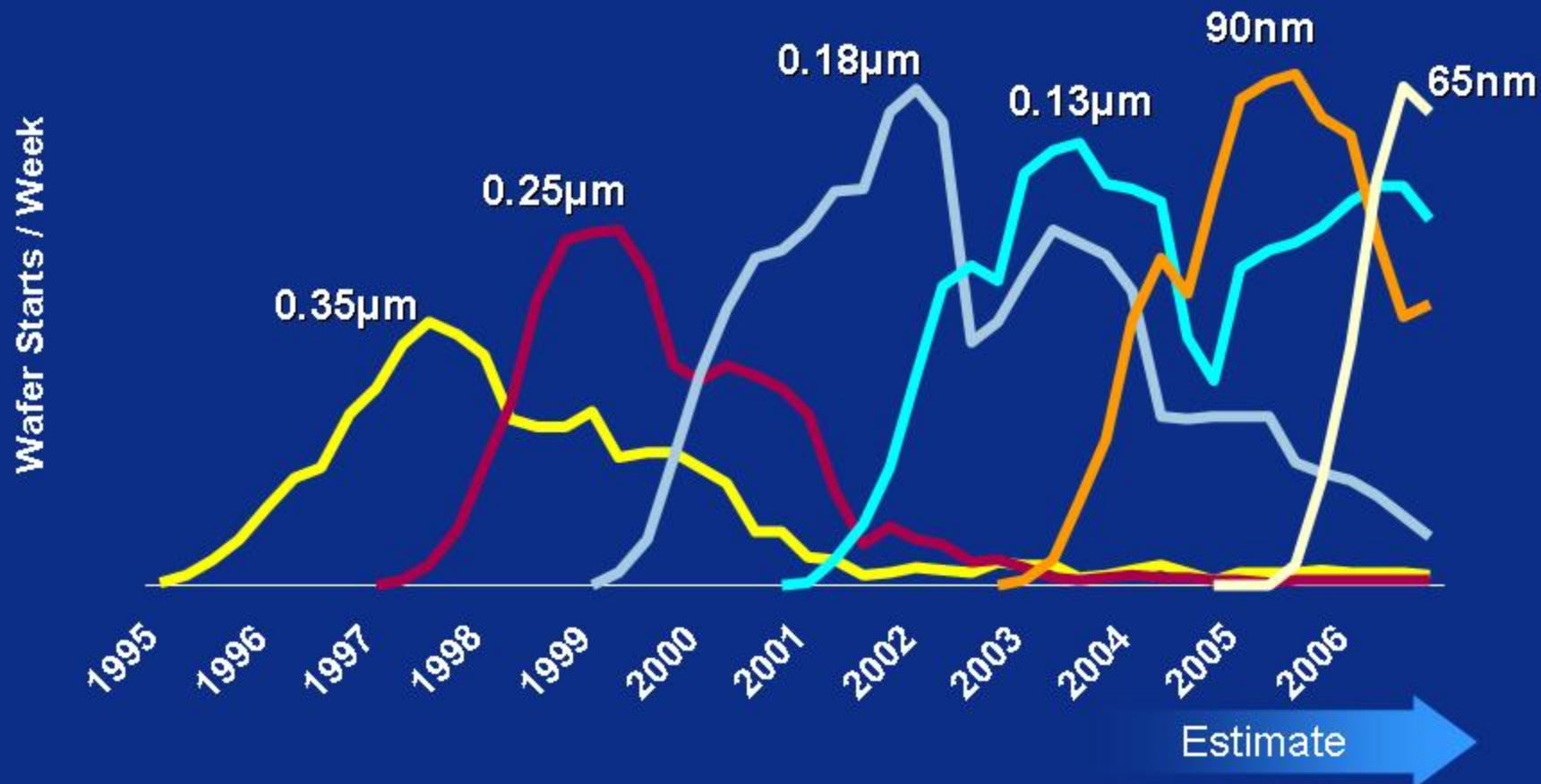


A photograph of a man and a young boy sitting on the ground under a large tree. The boy, on the left, is wearing a blue long-sleeved shirt and light-colored pants. The man, on the right, is wearing an orange jacket over a grey shirt and is looking at a laptop. The background is a soft-focus outdoor scene with dry grass in the foreground. A semi-transparent blue overlay covers the right side of the image, where the text is placed.

# **Intel® Centrino® Duo Mobile Technology**

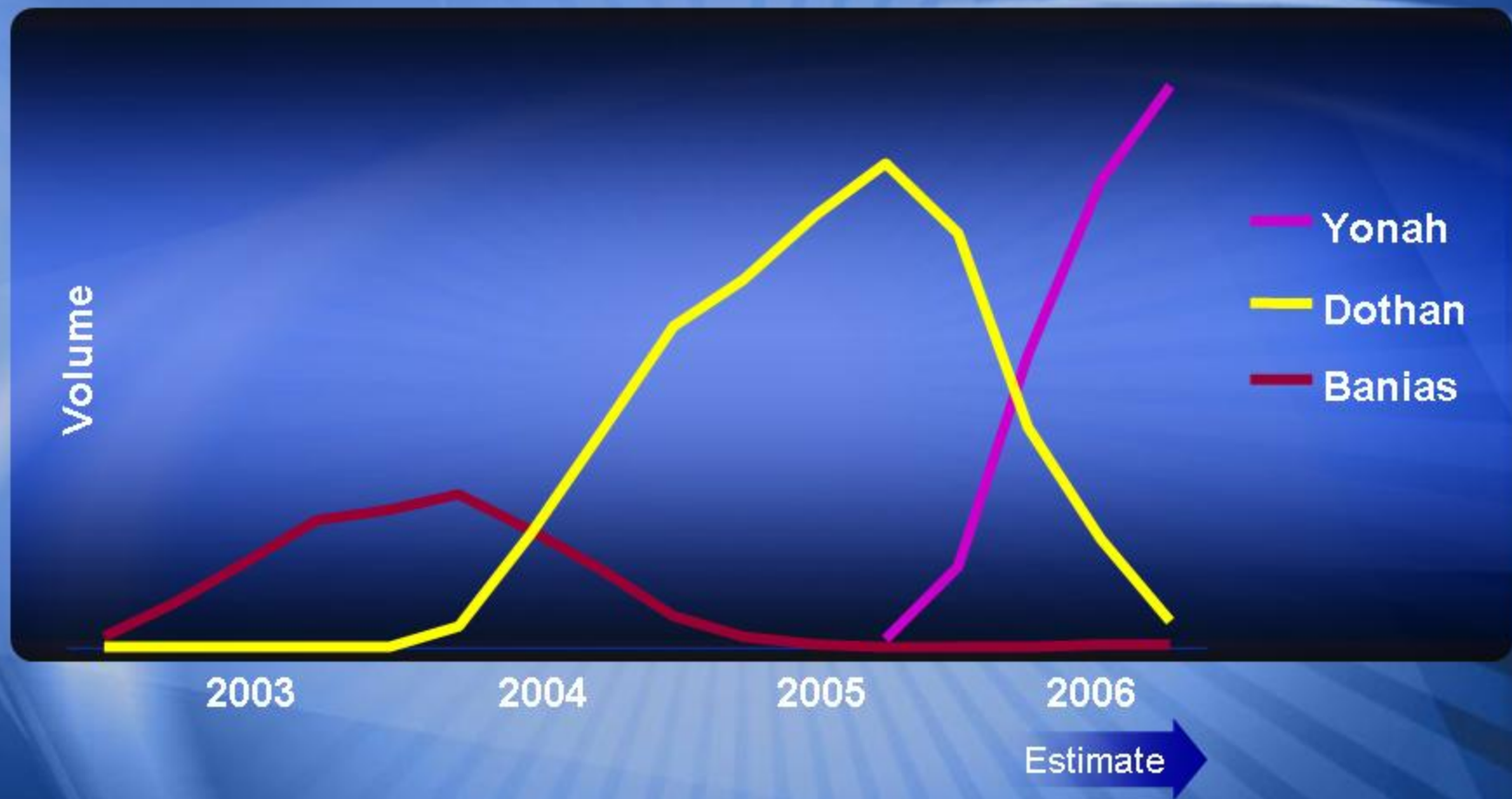
Mooly Eden  
Corporate VP & GM  
Intel Corporation  
Mobile Platforms Group

# Intel's Technology & Manufacturing Pipeline





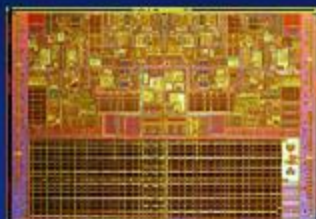
# Mobile CPU Ramp



**Yonah: Fastest Ramp Ever**

# Intel® Centrino™ Duo Mobile Technology

Intel® Core™  
Duo Processor  
667 MHz FSB



Intel's first **dual core** processor **designed from the ground up for mobile**, and manufactured on Intel's leading **65nm process** technology

Mobile Intel® 945  
Express Chipset  
Family



The new Mobile Intel® 945 Express Chipset Family with support for **faster processor and memory buses**, **improved graphics** and **low power capabilities**

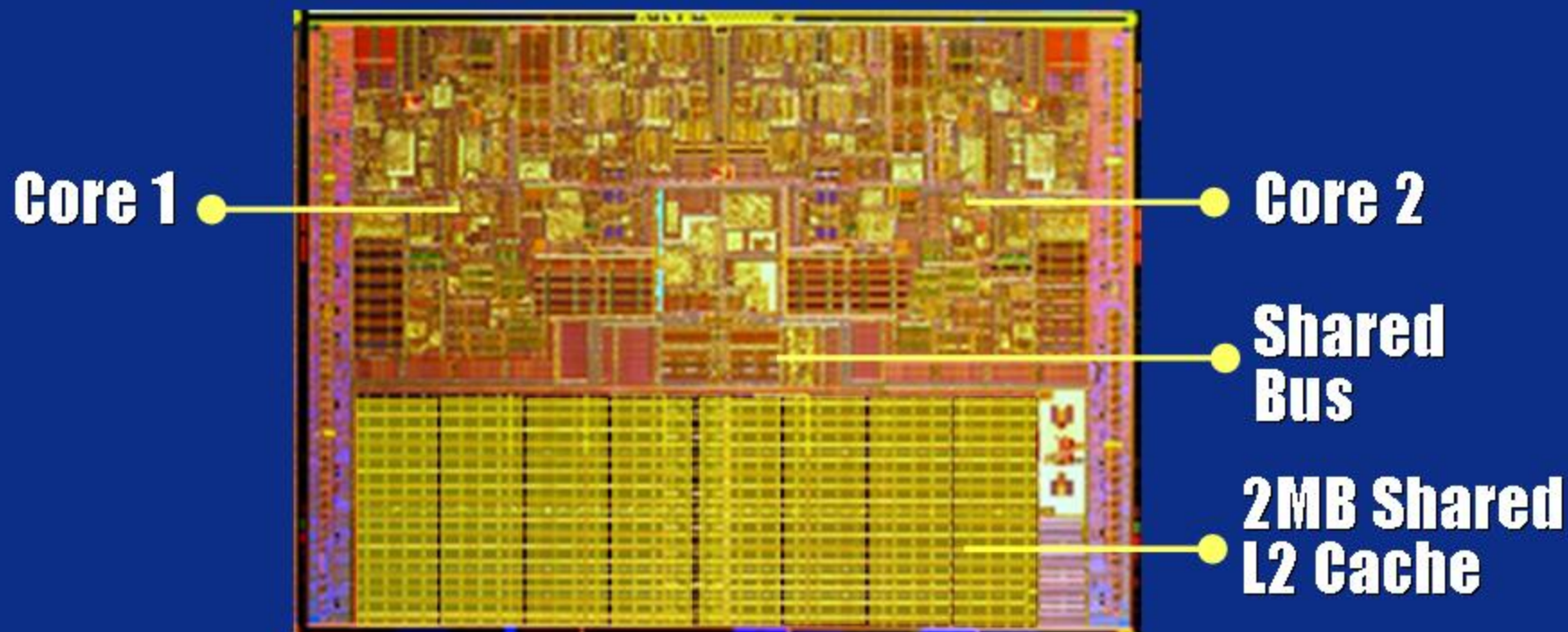
Intel® PRO/Wireless  
3945ABG Network  
Connection



The new Intel® PRO/Wireless 3945ABG network connection with **security support** and **new capabilities** for high performance connections



# Intel® Core™ Duo: Revolutionary Processor



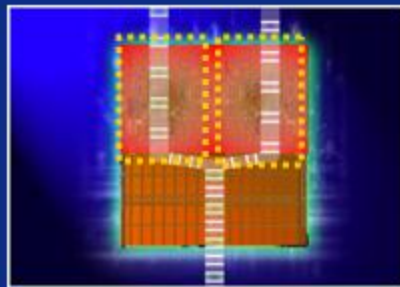
**New  
New**

Designed with:  
Dynamic Intel® Smart Cache Sizing  
and Enhanced Intel® Deeper Sleep

# Mobile Dual-Core Advantage

## Hyper-Threading Technology

- **ONE execution core** seen as “two logical processors”
- Parallel threads executed on a single core with **shared CPU resources**



Two execution cores on a single processor

## Mobile Dual-Core Architecture

- **TWO mobile optimized execution cores** on a single processor
- Parallel threads executed on separate cores with **dedicated CPU resources**

## Truly Parallel Multitasking & Multi-threaded Execution

+

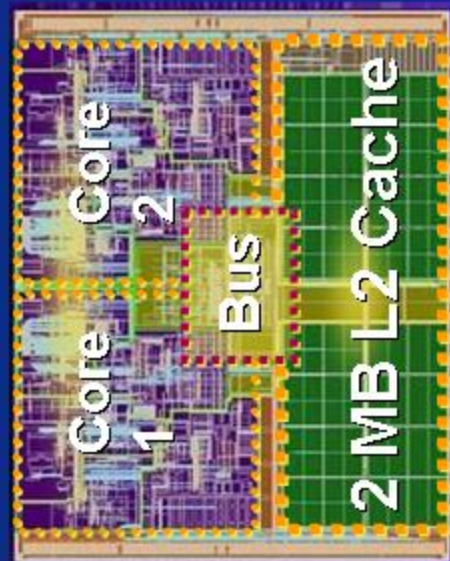
Ability to take advantage of the Intel® HT™ Technology ecosystem on mobile platforms

+

Intel enabling software vendors to write Dual-Core optimized applications



# Intel® Core™ Duo Processor with Intel® Smart Cache



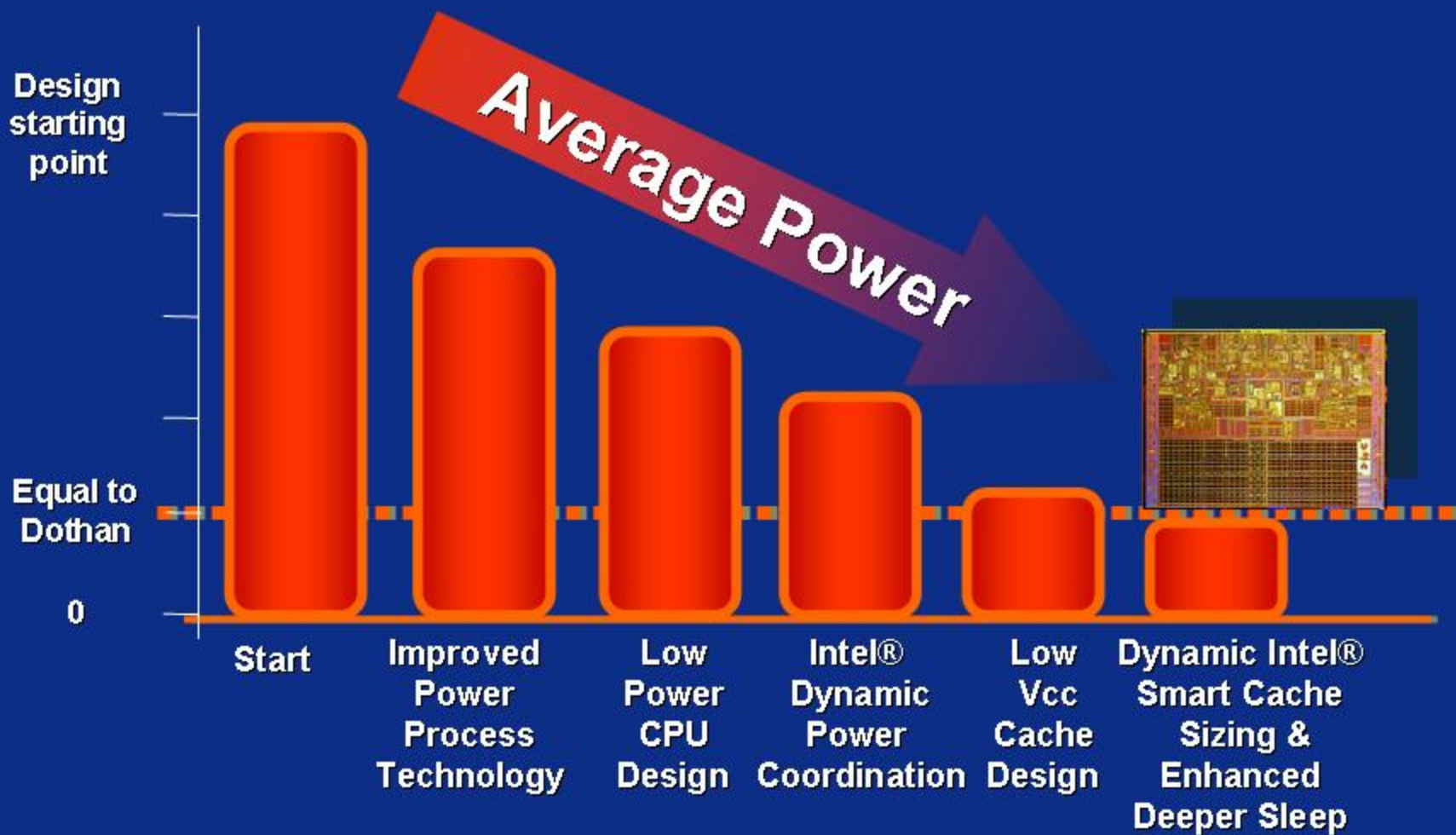
## Intel® Smart Cache

- Shared L2 enables access to full cache size when only one core is active
- Shared L2 minimizes bus traffic by allowing both cores to access single copy of data
- L2 & DCU data pre-fetchers and deeper write output buffer for improved cache performance
- Shared Bus router enables cache resource optimization in single & dual-core mode
- Bandwidth Adaptation Buffer enables 2x average L2 bandwidth when both cores are active

**Smarter and more efficient cache & bus design to enable better performance, responsiveness & power**

# Intel® Core Duo: Extending Battery Life

by minimizing average power

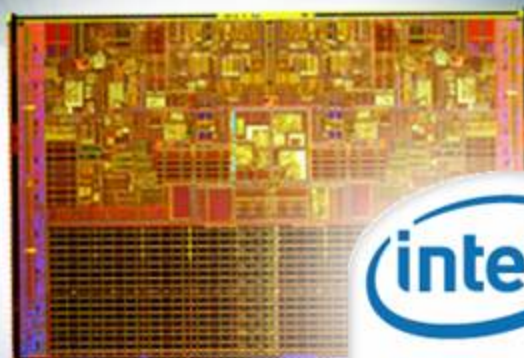


**Maintaining average power  
while delivering dual-core performance**



# OUTSTANDING PERFORMANCE

PERFORMANCE  
70%



POWER  
28%

# LONGER BATTERY LIFE

\*Performance and power information based on Intel® Centrino® Duo platform measurements





# Advancing The Four Vectors



## Performance

Up to 70%<sup>‡</sup> performance gain with the revolutionary dual-core processor for new levels of responsiveness

## Battery Life

Low power technologies enable 28%<sup>‡</sup> Intel component average power saving for improved battery life



## Wireless

More connectivity options and support for latest security standards to connect with confidence

## Form Factor

> 30%<sup>‡</sup> platform component size reduction and low thermal power options enable variety of designs





# Multitasking



## Digital Office: Multitasking and Responsiveness

Experience amazing responsiveness when running multiple applications at once.. With the breakthrough performance of the Intel® Core™ Duo Processor you have the power to archive email messages, view PowerPoint® presentations, and run Excel® calculations simultaneously. With power optimized Intel® Centrino® Duo mobile technology you can concentrate on your business tasks without the need to manage your own system resources for better responsiveness.

Microsoft Outlook®, PowerPoint®, Excel®, and McAfee® VirusScan®

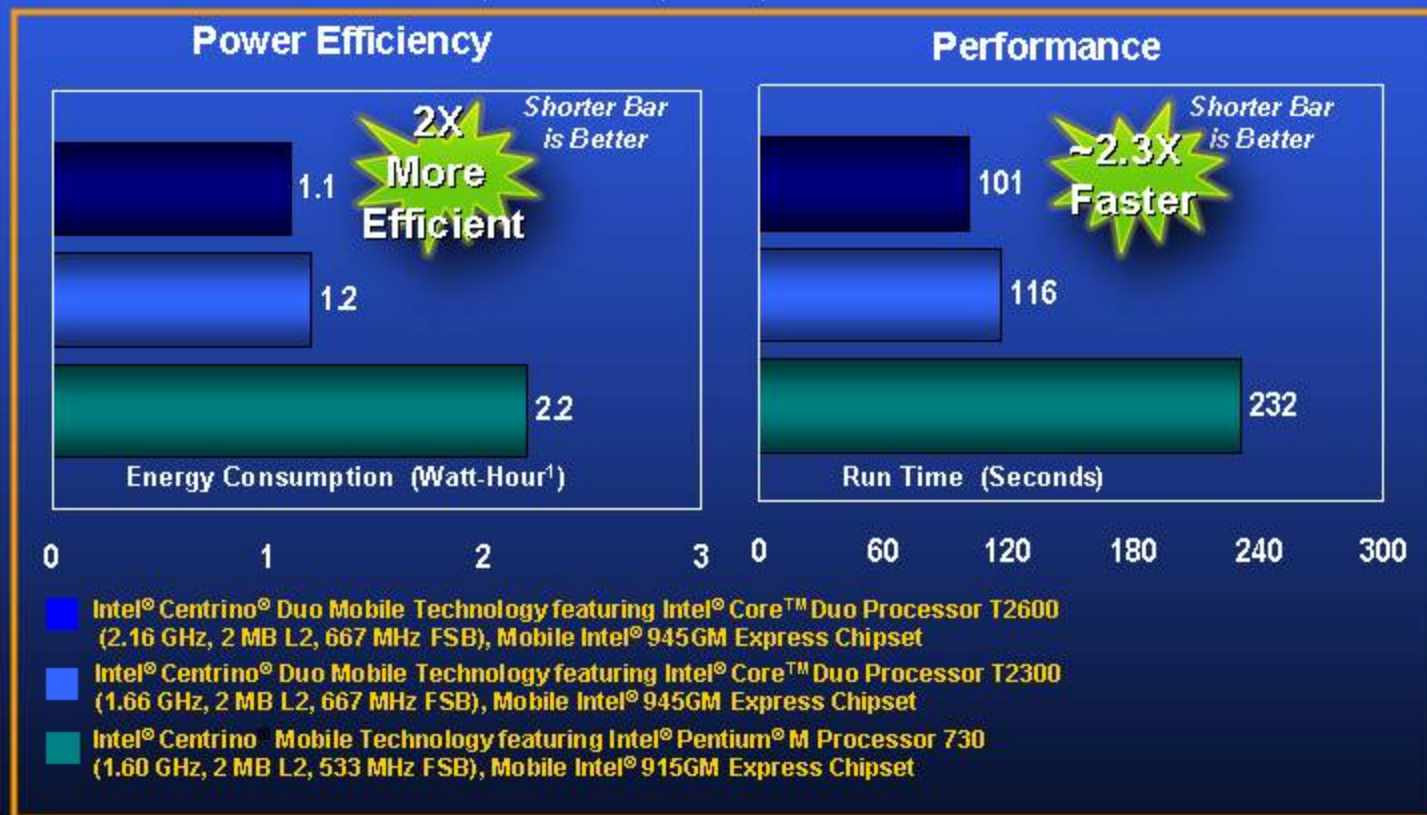


Figure 1. Intel® Centrino® Duo mobile technology performance and power efficiency with business application productivity and system protection

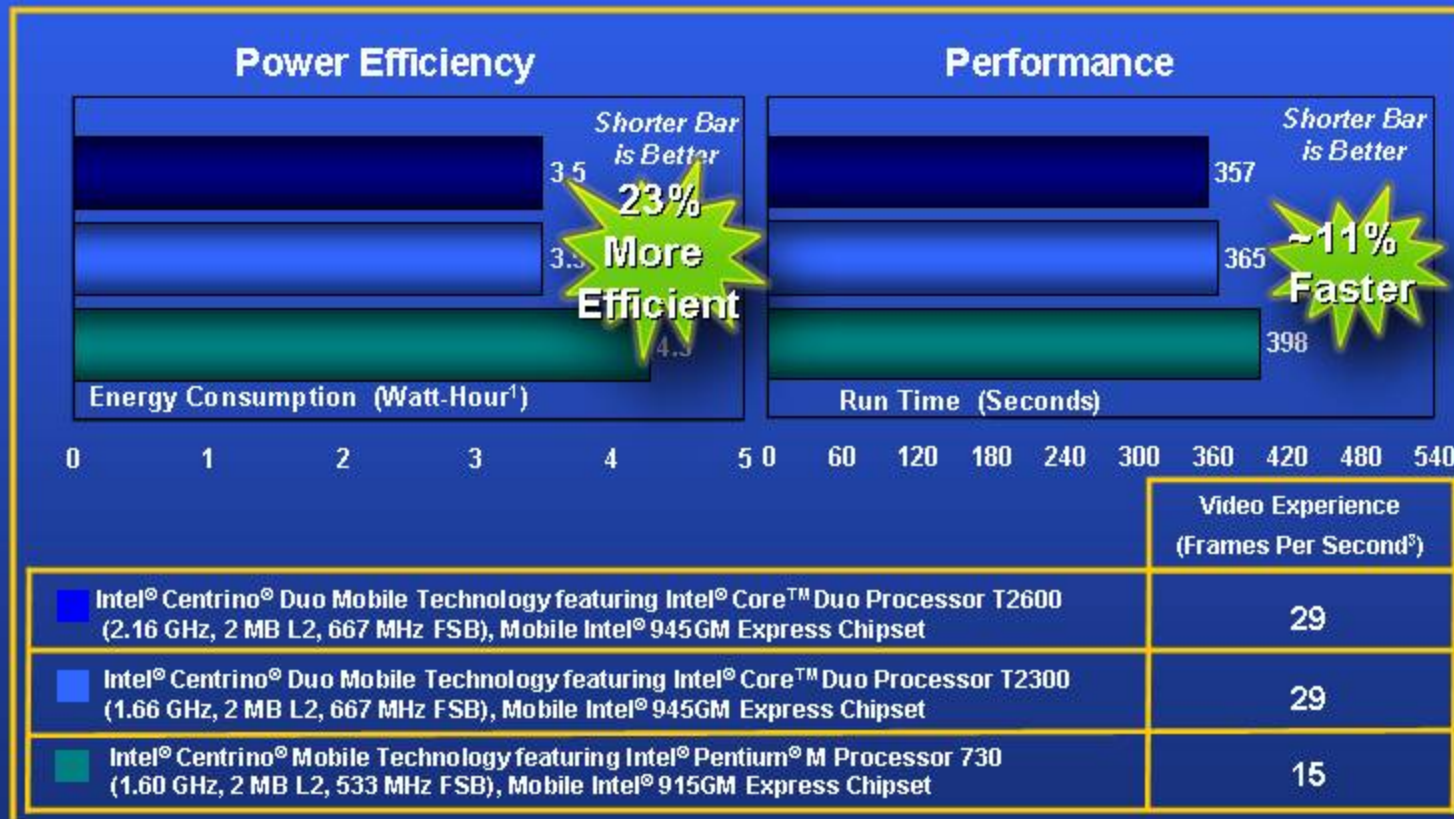
# High Definition Video



## Digital Home: DVD Creation and High Definition Playback

Why wait to enjoy high definition video? With Intel® Centrino® Duo mobile technology you can preserve your family's memories on DVD while watching your favorite high definition video. This multitasking scenario shows that the Intel® Core™ Duo processor has the capability to enable brand new usage models for consumers so they can have more fun on-the-go while consuming less energy.

Microsoft® Windows® Media Player® 10 and Pinnacle® Studio® 9b



12 Figure 1. Intel® Centrino® Duo mobile technology performance and power efficiency with DVD creation and high definition playback



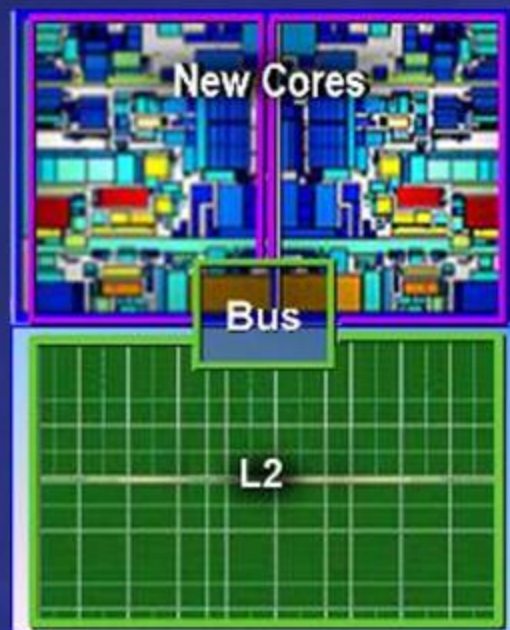
# Merom Key Features

Dual Core with  
Next Generation  
Micro-architecture

Intel® Extended  
Memory 64 Technology

Up to 4MB Cache  
Faster Front Side Bus  
Higher Core  
Frequencies

Improved Power  
Management &  
Performance Features

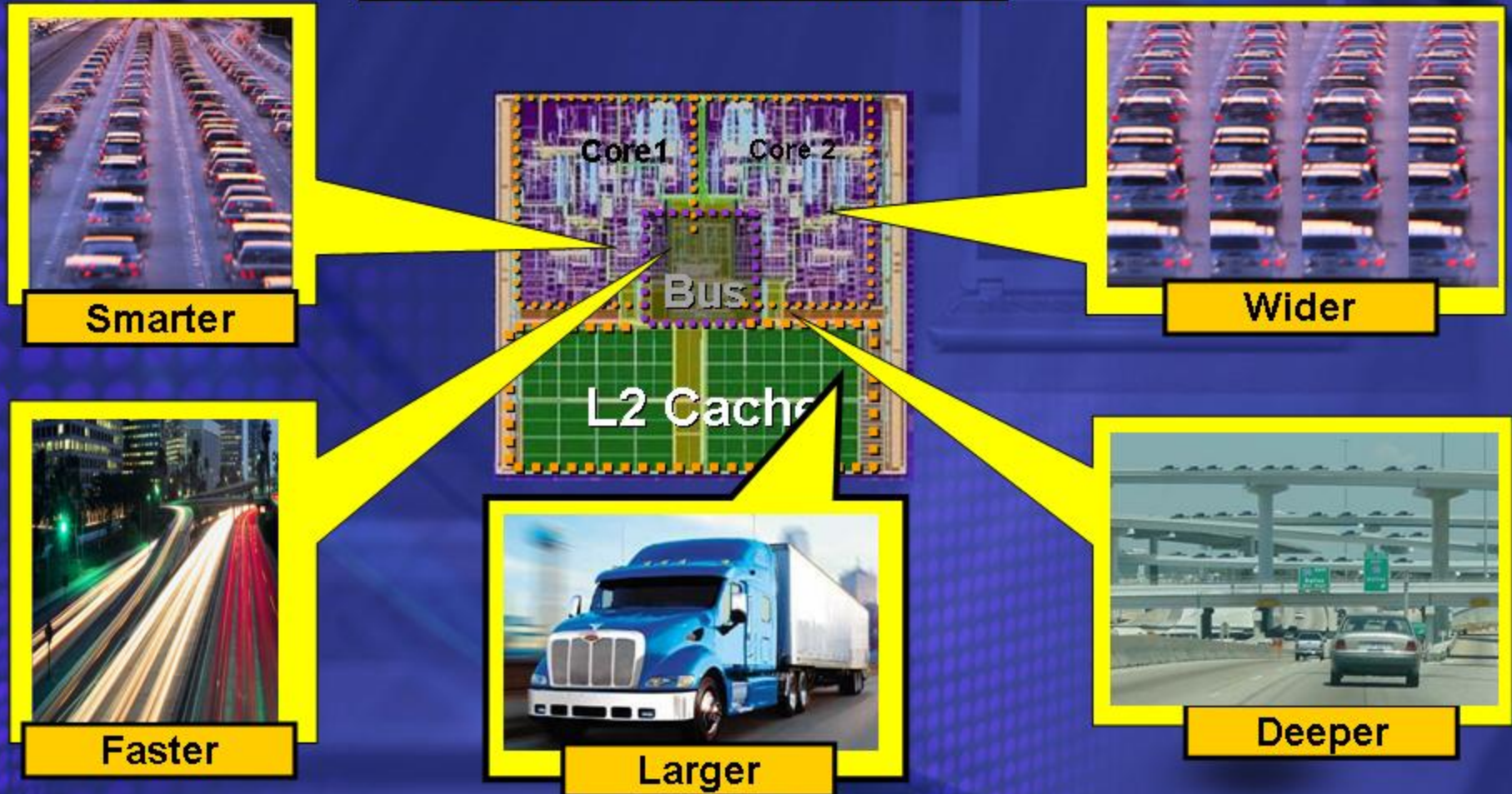


**New higher-performing, more efficient engine**



# Merom: Next Generation Micro-architecture

## Micro-Architecture Enhancements





# Platform Scalable Micro-Architecture

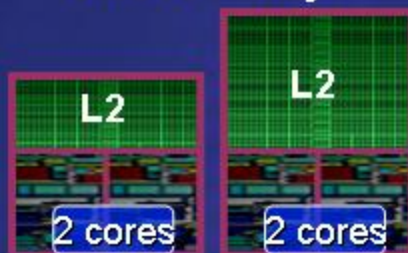
## Mobile Platform

### Merom Family



## Desktop Platform

### Conroe Family

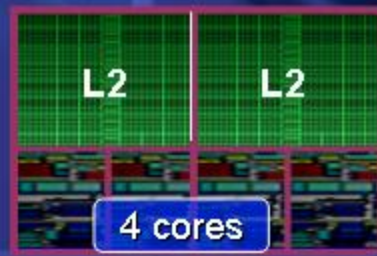


## Server Platform

### Woodcrest



### Tigerton



### Mobile Optimized

- Mobility TDP Envelope
- Mobile Platform FFs
- 2 Execution Cores – 65nm
- Mobile Power Optimizations
- Mobile Client \*Ts

### Desktop Optimized

- 65W Target TDP
- Smaller Desktop Platform FFs
- 2 Execution Cores – 65nm
- Multiple L2 Cache Sizes
- Desktop Client \*Ts

### Server Optimized

- ~40% reduction in TDP(Woodcrest)
- Smaller Server Platform FFs
- 2 to 4 Execution Cores – 65nm
- Wide Range of L2 Cache Sizes
- Server \*Ts
- DP/MP support

Next Generation Micro-architecture\*\*

**Single micro-architecture; feature-optimized products**



# Summary

- Intel mobile platform leadership continues on all vectors of mobility
- 65nm is ramping quickly
  - Will be the fastest ramp ever
  - Expect mobile to exit 2006 >75% dual core
- Intel® Centrino® Duo platforms enable 70% performance boost, 28% power reduction
- Dual-core ecosystem is ready
- Platform approach continues to pay off





# Risk Factors

This presentation contains forward-looking statements that involve a number of risks and uncertainties. These statements do not reflect the potential impact of any mergers, acquisitions, divestitures, investments or other similar transactions that may be completed in the future. The information presented is accurate only as of today's date and will not be updated. In addition to any factors discussed in the presentation, the important factors that could cause actual results to differ materially include the following: Intel operates in intensely competitive industries that are characterized by a high percentage of costs that are fixed or difficult to reduce in the short term, and by product demand that is highly variable. Product roadmap projections are affected by the timing and execution of the manufacturing ramp, product defects and errata (deviations from published specifications), changes in the timing of qualifying products for sale and changes in customer demand. For a variety of reasons, we may terminate product development before completion, or delay or decide not to manufacture and sell a developed product. For example, we may decide that the product might not be sufficiently competitive in the relevant market segment, or for technological or marketing reasons, we may decide to offer a different product instead. Intel's revenue and the gross margin percentage are affected by the demand for and market acceptance of Intel's products; the availability of sufficient inventory of Intel products and related components from other suppliers to meet demand; pricing pressures; actions taken by Intel's competitors; and Intel's ability to respond quickly to technological developments and to incorporate new features into its products. Factors that could cause demand to be different from Intel's expectations include changes in customer order patterns, including order cancellations; changes in the level of inventory at customers; and changes in business and economic conditions. The gross margin percentage could vary from expectations based on changes in revenue levels, product mix and pricing; variations in inventory valuation, including variations related to the timing of qualifying products for sale; excess or obsolete inventory; manufacturing yields; changes in unit costs; capacity utilization; impairments of long-lived assets, including manufacturing, assembly/test and intangible assets; and the timing and execution of the manufacturing ramp and associated costs, including start-up costs. Expenses, particularly certain marketing and compensation expenses, vary depending on the level of demand for Intel's products and the level of revenue and profits. Intel's results could be impacted by unexpected economic, social and political conditions in the countries in which Intel, its customers or its suppliers operate, including security risks, possible infrastructure disruptions and fluctuations in foreign currency exchange rates. Intel's results could be affected by adverse effects associated with product defects and errata (deviations from published specifications), and by litigation or regulatory matters involving intellectual property, stockholder, consumer, antitrust and other issues, such as the litigation and regulatory matters described in Intel's SEC reports. Intel's results could be affected by the amount, type and valuation of share-based awards granted as well as the amount of awards cancelled due to employee turnover. Please refer to Intel's most recent Earnings Release and most recent Form 10-K or 10-Q filing for more information on the risk factors that could cause actual results to differ.

